ABSTRACT

A method of processing sonic wireline or logging while drilling data acquired in a borehole that includes filtering the sonic data to attenuate tool-borne and borehole-borne arrivals; migrating the filtered sonic data; and beamforming the filtered and migrated sonic data to determine a position of a reflector with respect to the borehole. The sonic data may be processed down-hole, transmitted to the surface, and used for geosteering purposes while drilling. The filter may comprise an adaptive noise-attenuating filter capable of attenuating noise arising from different borehole modes from desired signal and allowing for changes in the source signature.